

## ABSTRACT OF THE DISCLOSURE

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A waveguide plate and a process for making the waveguide plate with a plate-like glass substrate (1), carrying a waveguiding layer (2), with at least one coupling grating on the surface carrying said waveguiding layer (2), which coupling grating is formed as a grating of lines with a period between 150 nm and 1000 nm, the extension of said grating being at least 5 cm with lines parallel to one another, wherein the coupling angle ( $\theta$ ) varies by not more than  $0.1^\circ/\text{cm}$  along a line of said grating and wherein the absolute value of the deviation of the coupling angle ( $\theta$ ) on said waveguide plate, from a predefined desired value, does not exceed  $0.5^\circ$ . The deviation from the average value of the coupling angle does not exceed  $0.3^\circ$ , preferably not  $0.15^\circ$  on the whole waveguide plate. The waveguide plate is suitable as part of a sensor platform and of an arrangement of sample compartments for chemo-and bioanalytical investigations in order to produce a coupling grating formed as a line grating with a grating period between 100 nm and 2500 nm